IN THE CLAIMS:

Please **AMEND** the claims as follows:

1. (Currently Amended) An implantable medical device for detection of changes in impedance in a patient, comprising:

means for generating measured impedances;

means for calculating period average impedances corresponding to a plurality of the measured impedances generated during a first time period;

means for generating an adaptive baseline trend of the calculated period average impedances;

means for generating a short term trend of the measured impedances corresponding to a second time period different from the first time period;

means for determining changes in relative position of the short term trend and the baseline trend; and

means for accumulating, in response to the determined changes, a difference between the baseline trend and one or a combination of a most recent measured impedance, a period average impedance, and the short term trend of the measured impedances.

2. (Canceled)

3. (Canceled)

4. (Previously Presented) The implantable medical device of claim 1, wherein the means for generating an accumulated difference sets the accumulated difference to zero when the short term trend intersects the adaptive baseline trend.

5. (Previously Presented) The implantable medical device of claim 1, wherein the means for generating an adaptive baseline trend initially generates

the baseline trend using a first computation scheme and subsequently generates the baseline trend using a second computation scheme different from the first computation scheme.

6. (Previously Presented) The implantable medical device of claim 5, wherein the means for generating an adaptive baseline trend performs the first computation scheme at a first rate and the means for generating an adaptive baseline trend performs the second computation scheme at a second rate less that the first rate.

7. (Previously Presented) The implantable medical device of claim 6, wherein the means for generating an adaptive baseline trend computes the first rate in response to a predetermined number of the generated measured impedances.

8. (Original) The implantable medical device of claim 7, wherein the predetermined number is equal to four.

9. (Previously Presented) The implantable medical device of claim 1, wherein the means for generating a short term trend initially generates the short term trend using a first computation scheme and the means for generating a short term trend subsequently generates the short term trend using a second computation scheme different from the first computation scheme.

10. (Previously Presented) The implantable medical device of claim 9, wherein the means for generating a short term trend performs the first computation scheme at a first rate and the means for generating a short term trend performs the second computation scheme at a second rate less that the first rate.

11. (Previously Presented) The implantable medical device of claim 10, wherein the means for generating a short term trend computes the first rate in response to a predetermined number of the generated measured impedances.

12. (Previously Presented) The implantable medical device of claim 11, wherein the means for generating a short term trend computes the first rate in response to the predetermined number being equal to four.

13. (Previously Presented) The implantable medical device of claim 1, further comprising means for comparing the accumulated difference to a predetermined threshold and determining corresponding significant events in response to the comparing.

14. (Previously Presented) The implantable medical device of claim 13, wherein the significant events determined by the means for comparing the accumulated difference to a predetermined threshold and determining corresponding significant events include one of storing data within the implantable medical device, apply or modifying a delivered therapy, notifying the patient, notifying medical personnel, and modifying frequency of impedance measurement.

15. (Previously Presented) The implantable medical device of claim 1, wherein the means for generating measured impedances generates the measured impedances between 12 pm and 5 pm.

16. (Previously Presented) An implantable medical device for detection of changes in impedance in a patient, comprising:

means for generating measured impedances;

means for generating an adaptive baseline trend of the measured impedances corresponding to a first time;

means for generating a short term trend of the measured impedances corresponding to a second time period less than the first time;

means for accumulating a difference between the adaptive baseline trend and one of a most recent measured impedance and the short term trend of the measured impedances; and

means for updating the short term trend by generating a weighted sum of the short term trend for two previous days and the measured impedance generated for the current day and the two previous days.

17. (Previously Presented) An implantable medical device for detection of changes in impedance in a patient, comprising:

means for generating measured impedances;

means for generating an adaptive baseline trend of the measured impedances corresponding to a first time;

means for generating a short term trend of the measured impedances corresponding to a second time period less than the first time;

means for accumulating a difference between the adaptive baseline trend and one of a most recent measured impedance and the short term trend of the measured impedances; and

means for updating the adaptive baseline trend by setting the adaptive baseline trend equal to a previous adaptive baseline trend reduced by a predetermined downdrift in response to the current adaptive baseline trend being greater than the current short term trend, and by setting the adaptive baseline trend equal to the previous adaptive baseline trend increased by a predetermined updrift in response to the current adaptive baseline trend being less than the current short term trend, wherein the updrift is greater than the downdrift.

18. (Original) The implantable medical device of claim 17, wherein the downdrift is approximately equal to 0.055 ohms and the updrift is approximately equal to 0.18 ohms.

19. (Previously Presented) The implantable medical device of claim 17, wherein the the means for accumulating a difference sets the accumulated difference equal to zero in response to the short term trend being equal to the adaptive baseline trend.

20. (Previously Presented) The implantable medical device of claim 1, wherein the means for generating measured impedances generates the measured impedances a predetermined number of days prior to generation of the adaptive baseline trend by the means for generating an adaptive baseline trend and generation of the short term trend by the means for generating a short term trend.

21. (Currently Amended) A method for detecting changes in impedance in a medical device, comprising:

generating measured impedances;

generating an adaptive baseline trend of the measured impedances corresponding to a first time period;

generating a short term trend of the measured impedances corresponding to a second time period different from the first time period;

determining changes in relative position of the short term trend and the baseline trend; and

generating, in response to the determined changes, an accumulated difference between the baseline trend and one or a combination of a most recent measured impedance, a period average impedance, and the short term trend of the measured impedances.

22. (Canceled)

23. (Canceled)

24. (Previously Presented) The method of claim 21, further comprising setting the accumulated difference to zero when the short term trend intersects the adaptive baseline trend.

25. (Original) The method of claim 21, wherein the adaptive baseline trend is initially generated using a first computation scheme and is subsequently generated using a second computation scheme different from the first computation scheme.

26. (Original) The method of claim 25, wherein the first computation scheme is performed at a first rate and the second computation scheme is performed at a second rate less that the first rate.

27. (Original) The method of claim 26, wherein the first rate is computed in response to a predetermined number of the generated measured impedances.

28. (Original) The method of claim 27, wherein the predetermined number is equal to four.

29. (Original) The method of claim 21, wherein the short term trend is initially generated using a first computation scheme and is subsequently generated using a second computation scheme different from the first computation scheme.

30. (Original) The method of claim 29, wherein the first computation scheme is performed at a first rate and the second computation scheme is performed at a second rate less that the first rate.

31. (Original) The method of claim 30, wherein the first rate is computed in response to a predetermined number of the generated measured impedances.

32. (Original) The method of claim 31, wherein the predetermined number is equal to four.

33. (Previously Presented) The implantable medical device of claim 21, further comprising comparing the accumulated difference to a predetermined threshold and determining corresponding significant events in response to the comparing.

34. (Original) The method of claim 33, wherein the significant events include one of storing data within the implantable medical device, apply or modifying a delivered therapy, notifying the patient, notifying medical personnel, and modifying frequency of impedance measurement.

35. (Original) The method of claim 21, wherein the measured impedance is generated between 12 pm and 5 pm.

36. (Previously Presented) A method for detection of changes in impedance a patient, comprising:

generating measured impedances;

generating an adaptive baseline trend of the measured impedances corresponding to a first time period;

generating a short term trend of the measured impedances corresponding to a second time period less than the first time period; and

generating an accumulated difference between the adaptive baseline trend and one of a most recent measured impedance and the short term trend of the measured impedances; and

updating the short term trend by generating a weighted sum of the short term trend for two previous days and the measured impedance generated for the current day and the two previous days.

37. (Previously Presented) A method for detection of changes in impedance a patient, comprising:

generating measured impedances;

generating an adaptive baseline trend of the measured impedances corresponding to a first time period;

generating a short term trend of the measured impedances corresponding to a second time period less than the first time period; and

generating an accumulated difference between the adaptive baseline trend and one of a most recent measured impedance and the short term trend of the measured impedances; and

updating the adaptive baseline trend by setting the adaptive baseline trend equal to a previous adaptive baseline trend reduced by a predetermined downdrift in response to the current adaptive baseline trend being greater than the current short term trend, and by setting the adaptive baseline trend equal to the previous adaptive baseline trend increased by a predetermined updrift in response to the current adaptive baseline trend being less than the current short term trend, wherein the updrift is greater than the downdrift.

38. (Original) The method of claim 37, wherein the downdrift is approximately equal to 0.055 ohms and the updrift is approximately equal to 0.18 ohms.

39. (Original) The method of claim 34, wherein the determined significant events are subsequently terminated in response to the short term trend being equal to the adaptive baseline trend.

40. (Original) The method of claim 21, wherein the measured impedances are generated a predetermined number of days prior to generation of the adaptive baseline trend and the short term trend.

41. (Currently Amended) An implantable medical device, comprising:

a plurality of electrodes;

an output circuit outputting a plurality of output pulse signals along a vector formed by electrodes of the plurality of electrodes;

a measurement circuit generating a corresponding plurality of measurement signals in response to the plurality of output pulse signals; and

a microprocessor determining a plurality of period average impedances in response to the plurality of output pulse signals and the plurality of measurement signals corresponding to a predetermined time period, and generating an adaptive baseline trend of period average impedances of the plurality of period average impedances corresponding to a first time period and a short term trend of period average impedances of the plurality of period average impedances corresponding to a second time period different from the first time period, the microprocessor determining changes in relative position of the short term trend and the baseline trend and generating, in response to the determined changes, an accumulated difference between the baseline trend and one or a combination of a most recent measured impedance, a period average impedance and the short term trend.

42. (Canceled)

43. (Canceled)

44. (Previously Presented) The implantable medical device of claim 41, wherein the accumulated difference is set to zero when the short term trend intersects the adaptive baseline trend.

45. (Previously Presented) The implantable medical device of claim 41, wherein the microprocessor initially generates the adaptive baseline trend and the short term trend using a first computation scheme and the microprocessor

subsequently generates the adaptive baseline trend and the short term trend using a second computation scheme different from the first computation scheme.

46. (Previously Presented) The implantable medical device of claim 45, wherein the microprocessor performs the first computation scheme at a first rate and the microprocessor performs the second computation scheme at a second rate less that the first rate.

47. (Previously Presented) The implantable medical device of claim 46, wherein the microprocessor computes the first rate in response to a predetermined number of the generated measured impedances.

48. (Original) The implantable medical device of claim 47, wherein the predetermined number is equal to four.

49. (Previously Presented) The implantable medical device of claim 41, wherein the microprocessor compares the accumulated difference to a predetermined threshold and determines corresponding significant events in response to the comparing.

50. (Previously Presented) The implantable medical device of claim 49, wherein the significant events determined by the microprocessor include one of storing data within the implantable medical device, apply or modifying a delivered therapy, notifying the patient, notifying medical personnel, and modifying frequency of impedance measurement.

51. (Original) The implantable medical device of claim 41, wherein the microprocessor determines each period average impedance of the plurality of period average impedances between 12 pm and 5 pm.

52. (Original) The implantable medical device of claim 41, wherein the microprocessor updates the short term trend by generating a weighted sum of the short term trend for two previous days and the period average impedance determined for the current day and the two previous days.

53. (Original) The implantable medical device of claim 41, wherein the microprocessor updates the adaptive baseline trend by setting the adaptive baseline trend equal to a previous adaptive baseline trend reduced by a predetermined downdrift in response to the current adaptive baseline trend being greater than the current short term trend, and by setting the adaptive baseline trend equal to the previous adaptive baseline trend increased by a predetermined updrift in response to the current adaptive baseline trend being less than the current short term trend, wherein the updrift is greater than the downdrift.

54. (Previously Presented) The implantable medical device of claim 53, wherein the downdrift is approximately equal to 0.055 ohms and the updrift is approximately equal to 0.18 ohms.

55. (Previously Presented) The implantable medical device of claim 41, wherein the microprocessor sets the accumulated difference to zero in response to the short term trend being equal to the adaptive baseline trend.

56. (Previously Presented) The implantable medical device of claim 41, wherein the microprocessor determines period average impedances of the plurality of period average impedances a predetermined number of days prior to generation of the adaptive baseline trend and the short term trend.

57. (Currently Amended) A computer readable medium having computer executable instructions for performing a method, the method comprising:

generating measured impedances;

generating an adaptive baseline trend of the measured impedances corresponding to a first time period;

generating a short term trend of the measured impedances corresponding to a second time period different from the first time period;

determining changes in relative position of the short term trend and the baseline trend; and

generating, in response to the determined changes, an accumulated difference between the adaptive baseline trend and one or a combination of a most recent measured impedance, a period average impedance, and the short term trend of the measured impedances.